Catalyst

What's New ?

WriteNow

by Hew Tet Loong

WriteNow the new word processor by T- Maker Software is here. With more than three years of development, it is designed as a general purpose word processor for the Mac user. In addition to being easy to learn, it has many features that other word processors don't have.

In WriteNow, what-you-see-is-what-you-get. Not only fonts, font sizes, styles, and paragraphs appear on the screen, but headers, footers, footnotes, columns, pagebreaks, and page numnbers. All is printed as shown on the screen.

Another good thing about WriteNow is its speed. It eliminates lengthy reformatting when small changes are made to large documents. Saving a document is fast because only the changes are written and saved to the disk.

The program has a built-in 50,000 spelling checker which uses only 107K on the disk. The dictionary can also be customized and personalized by adding words or deleting words.

Graphics can be embedded in a document as part of a sentence, part of a paragraph or a distinct paragraph. It also can be sized freely or proportionally.

Priced at $55.00, this new word processor is definitely worth your time and your money.

MacLightning

By Dewey Gaedcke

MacLightning Spelling Checker from Target Software is the fastest and most convenient spelling checker that we've ever seen. The current version, 2.0, includes the Merriam Webster Ninth New Collegiate Dictionary. The dictionary, containing 80,000 words, is stored in RAM Memory during use. If the RAM capacity of your Mac is occupied by the application (Word Processor) then MacLightning chooses the 3,000 most common words (including an assimilation of your most commonly used words) and installs them in a RAM Cache. Although this is not quite as fast, it still enables MacLightning to check words at an incredible speed of 75 words per second.

One of the most convenient things about MacLightning is that it installs as a desk accessory and can be opened from within almost any word processing program. Large documents and those written on unsupported word processors can be checked as text only from the clipboard! While the desk accessory itself is quite compact for its features, the Dictionary occupies 300K of disk space and must be present during operation. Those with only internal 400K drives or only 128K Machines will not be able to use this incredible tool unless they use some utility program to remove a substantial amount of the less commonly used words from the dictionary.

Contents

MacLightning will let you remove your own dictionary additions but not its original words.

To install MacLightning you are provided a copy of Font/DA Mover. It can then be installed as a desk accessory to the system of your favorite word processing disk. Remember that this must be the system that you use to boot the Mac. You have to be able to find the dictionary so don't forget where you put it.
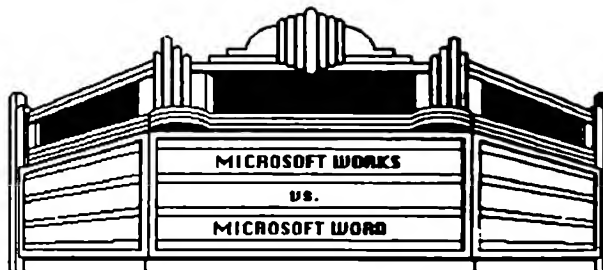
Once installed, MacLightning can be operated in either the "Interactive" or "Check Selection" mode. In the interactive mode it will wait until it detects a word ending such as space, comma, etc. Then, it will consult its dictionary and beep if the word is not present. You may then Type *Command 1* and MacLightning will look up the word and display the correct spelling in its dictionary window. Now Type *Command 2* and the word will be instantaneously replaced with the correct spelling. You can also wait until the end of the sentence to make the substitution as long as you have misspelled only one word. In this mode, it only remembers the last mispelled word.

MacLightning also works in "Check Selection" mode so you can select the text to be checked and perform all your corrections at once. An analysis window appears and informs you as to the number of words not found in MacLightning's Dictionary. Remember that these may be proper names, foreign words, abbreviations or words actually misspelled. You will want to add commonly used names and places to the dictionary. For the words that you want to change, MacLightning opens the **Change** window from your particular Word Processor and will substitute the correct spelling throughout the document. Another innovative feature is MacLightnings ability to find the correct spelling for words misspelled phonetically (i.e. fone--phone).

Another helpful feature is MacLightning's automatic capitalization of replacement words in case the original misspelled word was capitalized. MacLightning will also notify you if you fail to capitalize the first word in the sentence or if you write a word two times in a row. It also checks for correct contractions and will beep if a capital is placed in the middle of a word. Also available from Target Software is a Thesaurus Module, a Legal dictionary and a Medical dictionary. This fantastic spelling checker costs $64.00 and will be available at the MicroCenter soon. Call for availability.

A Comparison of Word Processors from Microsoft

by Jeffrey Herman

MS Works is the new integrated application from Microsoft. As discussed in the previous Catalyst issue, (see the December 1986 issue) the applications included in MS Works are word processing, data base, spreadsheet, and communications. The purpose of this article is to compare the word processor in MS Works to Microsoft's other word processor, MS Word version 1.05.

Let's start with those features that Works and Word have in common. Both have the usual Macintosh word processing features, including changing fonts and styles, search and find capabilities and paragraph justification. Also, both provide for print merging.

There are certain features contained in Word that are not found in Works. These include the glossary, which allows you to insert quickly often-used sections of text. A second useful feature of Word is the Show Paragraph command located under the Edit menu. Show Paragraph makes your screen display special, unique characters wherever spaces, tabs, and paragraph endings occur in your document. Word also provides for footnoting.

A fourth advantage Word has over Works is the placement of running heads. A running head is information that appears at the top or bottom of every page. An example of a running head is the page number. Word allows you to indicate the exact location (distance from the top of the page and from the left side of the page) where you would like the running head to appear. However, Works only lets you indicate whether you would like the running head left, center or right justified. It always places the running head about 1/2" down from the top of the page. This difference is very important to graduate students working on their thesis or dissertation. Many have asked if the Works word processor is appropriate for their thesis. The answer is probably not. The reason is that most thesis requirements state that the page number should be printed 1" down from the top of the page and 1" across from the right side of the page. Because Works automatically places the running head 1/2" from the top of the page, it is inappropriate for most theses.

The most important advantage that Works has over

Word is the flexibility to use graphics in your document. By choosing Draw... from the Edit menu, you can put boxes, lines or circles of any size and various border widths directly into your document. Works is the only Macintosh word processor that provides this drawing capability and it is one of the few that allows you to place graphics and text on the same horizontal line.

Because the word processing application is usually the most often-used, it is very important to spend some time determining your needs. Also, it is vital that you find out the strengths and weaknesses of each application to ensure you select the one that most provides for your needs.

Spice Up Your Start-up Screens

By Michael Reese

Are you tired of seeing Welcome to MacIntosh every time you start-up your Mac? How would you like to use a great Thunderscan document or Click Art to create a humorous or informative start-up screen. If so, Screen Maker by Bill Atkins is exactly what you need.

Screen Maker is a small 6K application written in early 1985, and available from many bulletin boards or User Groups. Although not new or extremely powerful, Screen Maker is great for adding variety to your start-up disks. For example:

Welcome to
Macintosh!
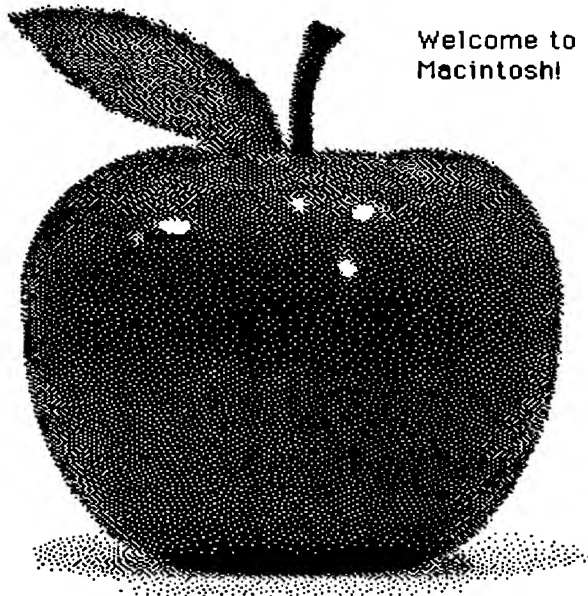
This program converts back and forth between a MacPaint document and a resource file called Start-up Screen. It is very simple to use and requires very little knowledge of resource files.

The File menu consists of only three commands which are self-explanatory. They are Doc to Screen, Screen to Doc, and Quit. The last one, Quit, is obvious. To go from a Paint document to a start-up screen, simply choose Doc to Screen and a standard file opening window will appear with all the Mac Paint files on the current disk. Choose the picture that you want to be on the screen and click open. Screen Maker will respond by

asking where you wish to save the new resource file with the default name Start-upScreen. Always leave the name as Start-upScreen. Likewise, to go from a start-up screen to a Paint file, choose Doc to Screen under the file menu. Screen Maker will show all the start-up screens on the disk allowing you to convert them to a Paint document. Using Screen Maker is that easy.

Two things to remember about these new resource files are: 1) always name your start-up screen as "Start-upScreen" and, 2) put the "Start-upScreen" in your system folder with the system so that it can be found at start-up. You can make anything your start-up screen. Remember, what you see when you turn on your computer is between you and your Mac.

DOS 3.2 Users: A Patch!

by Brian Kennedy

You may or may not realize that the original versions of Microsoft's DOS version 3.2 has bugs. You also may not realize that there is a patch release available free to anyone who asks. It is available through any IBM dealer (assuming the IBM dealer knows about it and has asked for it from IBM). In case you did not know your DOS has bugs, here's a list of the bugs that this patch release will fix:

1) The DISKCOPY command incorrectly handles 360K diskettes in 1.2M disk drives. If you attempt to copy a 360K diskette to a blank 360K diskette using the DISKCOPY command, the blank diskette should be automatically formatted. But it doesn't, it crashes, gives error messages, or just produces an unreadable diskette instead.

2) XCOPY has difficulty in multi-user environments. That problem has been smoothed out. Most of the other problems involve the interfacing of different keyboards, in particular the XT enhanced keyboard. BASIC and BASICA files replace the old versions that do not respond to the enhanced keyboard's cursor keys. There are a few other files that are involved with the keyboard interface.

Finally, it has some documentation and some program files to make the patching job easy.

Recovering Files with Mac Zap Recover

By Ying T. Hung

Sad Disk

Happy Disk

If you diligently make backups of valuable files, the loss of too much time from trying to recover a damaged disk file can be prevented. However, when accidents happen it maybe possible to recover files using Mac Zap Recover.
1. Somethings to Try First.

(a)If the Macintosh is turned off without first ejecting a disk or doing a 'shutdown' the desktop file on the disk can be corrupted. This results in apparent loss of files.

The desktop file can be rebuilt by booting up the system with an undamaged disk then inserting the damaged disk with the command and option keys held down.

If this procedure does not work the disk has more serious errors.

It may be possible to recover files on the disk using Max Zap Recover.

(b) If a MacWrite file cannot be opened it may be possible to open the file from Microsoft Word.

Once the file is opened it has to be saved with the 'text only' option selected so that it can be opened by MacWrite. This procedure removes all formatting information from the file.

2. Mac Zap Recover (MZR) program can recover lost or damaged files.

(a) Recovering trashed files: When a file is trashed and the trash emptied, the directory information for the file is deleted. However the data for the file still exists on the disk, but the directory has no information to reach the file.

If the data for the trashed file is not written over, it is possible to recover the file.

MZR can scan the entire disk for disk blocks holding file information. This procedure finds all blocks belonging to each file, including the trashed files. MZR can recover the trashed file by rebuilding the directory information.

(b) Recovering Files from Damaged disks.

MZR follows roughly the same procedure for damaged disks as for trashed files.

Disks with a damaged directory, allocation or boot blocks, may not be mountable. MZR handles this problem by clearing these blocks. The disk can then be rescanned to find files on the disk. Since the directory was destroyed, the type and creator information has to be reset for each file recovered. Each file that was found by MZR can be rebuilt and a new directory created.

Mac Zap Recover is available from :
Micro Analyst Inc.
P.O. Box 15003
Austin, Tx 78761
512-926-4527

Pascal and the Macintosh

By Iyad Nahas and Brian Kennedy

So, you have been confronted with the reality that you will need, or even be required to use a Macintosh for your computer programming class. You may or may not have ever used a Mac, and certainly haven't used Mac Pascal, but you figure it is probably similar to other Pascal compilers that you have used. Upon booting up, you find you're quite mistaken. Mac Pascal (the original and most commonly used Pascal for the Mac) isn't even a compiler, it is an interpreter! Three windows face you, none of which looks familiar. Later, you will confront other problems, in particular how to deal with the file system. If all of this sounds familiar then this article is for you. In addition, we will discuss Lightspeed Pascal, a

new high-speed compiler for the Mac, for those of you who have a choice of which Pascal to use.

After start-up, there are three windows on the screen. The one on your left is Mac Pascal's built-in editor. This is a Macintosh type editor designed for Pascal program writing. It will indent your program lines and highlight keywords automatically. It even eliminates errors by outlining illegal statements and typing errors. The other two windows will receive the output of your program (one for text that will also echo your input, the other for graphics).

You will begin by typing your program into the built in editor. Being an interpreter, Mac Pascal provides a fairly simple environment for program development. Once your program is typed, pull down the Run menu and you have a number of ways to execute your program (no need to compile!): you can just run it, step through it statement-by-statement, or set breaks to stop your program. Your output will appear in the windows to the right. You also have an "Observe" window that displays the values of any variable(s) you want, and updates every time the program is paused or halted. And finally there is an "Instant" window that enables you to enter and execute any statements at any point without the need to reedit your program. If an error occurs, you always get a small box explaining the error and a pointer to where the error was in the program window.

One often asked question is how to create a data file using MacPascal. The simplest way is by declaring a variable of type Text in your program heading, say 'data' for example. Then you can do the following:

Open(data,*title*);

title is any variable (or constant) string variable denoting the file and its position (for example: 'Myfile'). Or you may prefer to use the following:

Open(data,OldfileName('message'));

OldfileName will display a familiar looking file selection dialog box (titled *message*), and returns the name of the file selected to the Open statement.

Output files can also be created, opened and saved using the following:

Open (data, NewfileName('message'))

The next step would be to reset (or rewrite) your files which are standard Pascal procedures. All remaining I/O calls should include the name of the file (data in our example.) example :

read(data,var1,var2...);

The files are automatically closed for you, and any dynamic variable disposed of when the program terminates. You can also use a close(file) statement.

Also, your output can be echoed to the printer and/or to another file by selecting these options in 'preferences' from the Windows menu. Or you can access the printer (or modem) directly from your program by using Printer: (or modem:) in place of file name. Example:

write(Printer:,'any ASCII codes recognizable by ImageWriter');

MacPascal pretty much follows standard Pascal except for the following cases:
1. 'String' is a reserved type in MacPascal. This allows you to declare variables as strings and manipulate them using an available collection of string functions and procedures.(See more in the 'MacPascal Technical Reference manual'.)
2. You can use an 'otherwise' statement in Case.
3. Ordinal types can be printed. Example if you declare-
   Type   Colors=(brown,green,blue);
   Var   Eyes:Colors;
   then in your program:
   Eyes :=brown;
   write('The color of my eyes is ',Eyes);
   will produce 'The color of my eyes is brown' printed.

Lightspeed Pascal uses a text editor identical to MacPascal's (both programs were produced by the same company.) However, in Lightspeed Pascal you get a much more powerful debugger that allows you to follow the execution of the program much more easily. The debugger in Lightspeed Pascal is extremely sophisticated and enables you to manipulate memory and variables during the execution of your program. The Macintosh toolbox can be accessed fully, and it comes with a large collection of other libraries like 3-D graphics, speech, and mathematics.

Drawbacks to Lightspeed include, the time you have to spend learning about the Macintosh libraries. Also, you will need to spend more time learning the process of making 'projects.'

Many Pascal programs are now on the market for the Macintosh. The MicroCenter carries two Pascal programs: Macintosh Pascal and Lightspeed Pascal. If you plan to do some serious programming in Pascal or want to write large or complex programs, then the best choice is Lightspeed Pascal . On the other hand, if you need a program that is efficient and quickly learned, then MacPascal is an excellent program. Without knowing the differences between the programs, it would be difficult choice to make.
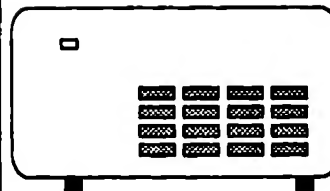
The Hard Disk Decision

By Jared Lackman

In the realm of computer hard disk use, the MicroCenter offers its patrons basically five choices: the Apple Hard Disk 20, the Apple Hard Disk 20SC, and the DataFrame hard disks. The Data Frames and The Apple Hard Disk 20SC operate through the new SCSI port on the Macintosh Plus, hence they are frequently called "scuzzy" drives. Consequently, Mac 512 users are limited to the original Apple Hard Disk 20, which connects through the external drive port. Basically, the only difference between the hard drives connecting through the drive port and the "scuzzy" drives, from a user standpoint, is speed. The "scuzzy" drives are slightly faster.

Macintosh Plus users, if they wish to utilize their SCSI port for a hard disk, can choose between either of the "scuzzy" drives offered by the MicroCenter. Basically, the following are pertinent considerations:

1) PRICE
The DataFrame 20 is priced at $825.00. DataFrame also offers the 20XP for $980 and the 40XP for $1420. The XP's are faster drives, and of course the 40XP has twice as much storage. All are ready to hook up to the Mac Plus as is. The Apple Hard Disk 20SC is slightly more expensive at $965.00. With the Apple Hard Disk 20SC, however, the user must also purchase an SCSI Terminator, $22.00, and an SCSI System Cable, costing $35.50.

2) WARRANTY
The Data Frames come with a one year warranty, which basically amounts to this: if the user has a defective drive, he can exchange it at the MicroCenter for a new one during the warranty period. The warranty is a good one with one drawback. The data on a defective drive will probably be lost. The Apple Hard disk warranty lasts 90 days, during which the MicroCenter will service the drive. This implies that data from a crashed drive might be recoverable at the MicroCenter. All hard disk users must never forget the inherent hard disk rule: ALWAYS HAVE BACKUP COPIES OF ANYTHING ON THE HARD DISK.

3.) QUALITY
The DataFrames and Apple hard disks have performed quite well at the MicroCenter. In terms of speed, the difference is negligible, and thus not a factor for most users. The Apple Hard Disk has a built in fan, so it is a little cooler but a little more noisy. The Apple Hard Disk lies flat under the Macintosh, while the Data Frame stands upright.

Given these considerations, one cannot really make a bad choice in purchasing a hard disk, but he can make a better choice for his particular needs.
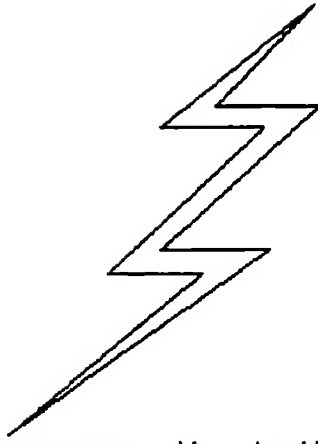
Surge Suppressors: Protecting Your Computer

by Marta Stewart

All electrical equipment is subject to spike damage. Electrical glitches and overloads can occur due to extraneous equipment signals, static electricity, or lightning. Such a mishap is not limited to your computer, either. Anything connected to an electrical outlet can be damaged by a sudden surge in the electrical line. This can include your computer, your printer, your hard disk, your TV or stereo.

Discrete devices, in particular, are going to be the most sensitive to surges. In the case of your computer and printer, various internal components could be damaged or destroyed, such as the power supply and/or your logic board. When deciding whether or not to purchase some form of surge protection for your computer, you may want to consider some of the costs involved in replacing these components. If the board and power supply are not completely destroyed, then the MicroCenter can exchange them for new ones. *With an exchange,* a power supply will run $125.80 and a 512k logic board will be $213.45 plus tax. In the event of very serious damage, an exchange will not be accepted and the cost will run even higher. (Also keep in mind that AppleCare does not cover misuse or Acts of God.)

There are two types of products that can be used to protect your computer and its peripherals. First, there are surge suppressors. Surge suppressors, in effect, take on the overload and smooth out the current before it reaches your device. It is possible, in some cases, for a very sudden and very strong spike to get past the suppressor before being recognized and reduced. While surge suppressors do offer an improved degree of protection, they do have their limitations.

Another option is to use surge protectors. A surge protector involves the use of fuses. When a large enough spike passes through the line, the fuse blows and the electricity is blocked from continuing on through the line. When the fuse blows, it will have to be replaced; but the cost of a new fuse is relatively very inexpensive. Again, a very strong and sudden spike may be capable of getting past the protector.

Lightning, for example, is likely to cause an extremely powerful overvoltage on your line. When it's lightning, it is best to unplug all your discrete devices. This is the only way that you can reasonably guarantee that your equipment won't be affected. Another situation in which the suppressors and protectors won't be of help is in the case of a power failure. Your equipment will probably not be damaged, but you are likely to lose all or part of your data. (Some files can be recovered, however, by using special software tools.)

If you are interested in purchasing a surge suppressor, the MicroCenter sells the Kensington Surge Suppressor ($36.00), the Kensington System Saver ($70.00), and the Kensington Mac Control Center ($66.25). The Kensington Surge Suppressor replaces the power cord on your Mac. The System Saver, on the other hand, slides into the "slot" on top of your Mac. It also includes two outlets for your peripherals, a master switch for your Mac and (up to 2) peripherals, and a fan. The fan provides a means of keeping your Mac cool to prevent overheating damage. The Control Center sits next to your Mac and, in addition to providing a surge suppressor, acts as a master switch for your Mac and three peripherals. (Individual switches are provided as well.)

The MicroCenter has recently begun carrying the Curtis SAFE-Strip Surge Protector ($16.00). This is, basically, a 6-outlet power strip with a 15-amp circuit limit. It's unlikely that the fuse will blow, but if it does, it is easily accessible for replacement. While primarily a surge protector, the SAFE-Strip also has a limited surge suppressing capability. In addition, the Strip can be used to protect your television, stereo system, and VCR.

In the end, you need to weigh the pros and cons for yourself. But definitely stop to consider buying a surge suppressor or protector as part of your protective maintenance program for your Mac.

"An Apple a Day..." Tips On Keeping Your Equipment Healthy

By Mike Puckett

Before I address the issue for which this article is entitled, I would first like to resolve some old business. A number of readers have inquired as to when I am going to complete my first series of articles, "Tips On Using Microsoft Word More Productively." Well, it just so happens that Microsoft is on the verge of releasing the latest version of Word (3.0), and I would like to conclude my series with a review of that product. Those of you wishing to update your version of Word can obtain the details for doing so by phoning the MicroCenter hotline number (471-6227).

Now, let's face it, computer repair costs are generally quite expensive. And, unfortunately, the expenses incurred are not always "just" monetary. Indeed, sometimes the loss in time can very well exceed the losses in money. As a result, I would like to present some tips that might prevent your equipment from succumbing to electronic ills. We will first look at the computer itself, and then we will look at printers, hard drives, and other peripheral devices.

The Macintosh. As most of you probably will know, the Macintosh is a "closed architecture" machine. That is, it was never really designed to be opened up and serviced by the user. Even so, there are a number of

external preventative maintenance procedures that, you, the user, can perform. By far, probably the most important thing you can do for your computer is to provide it with some type of surge protection or surge suppression. Generally, surge protection can be provided by using what is known as a "line filter." Literally, what this kind of device does is to provide a breaker-like facility to your computer's power. Whenever too much (and sometimes too little) power comes through your line, the breaker is triggered, and the power coming through the line filter is shut off. To restore the power through the line, you must either replace a fuse or throw a switch. With surge suppression, the situation does not generally get so drastic. For a more detailed description of the surge suppressors the MicroCenter sells, refer to Marta Stewart's article on page 6 of this newsletter.

Another item that can help to prolong the life of your Macintosh's power unit is a fan. Since most internally installed fans void the Apple warranty (and the extended AppleCare warranty), external fans are the way to go. To this end, many manufacturers have been creating fans that can be easily installed into the Macintosh's carrying hutch, which is located on its top. (The idea behind these fans is that they aid in the already established convection process.) One such fan is the Kensington System Saver, which not only acts as a fan but also as a central "control center." That is, it can provide *surge suppressed* power to the Macintosh and up to two other devices, each of which can be turned on and off with a convenient front switch. Surprisingly, most of these fans, including the System Saver, are fairly quiet. (The System Saver can be purchased at the MicroCenter.)

Nevertheless, turning the Macintosh on and off frequently can be destructive to the power unit. If you know that you will be using the machine later in the day (like after lunch), just save whatever it is that you are working on, and dim the screen. If you don't like dimming the screen, there is a neat public domain screen saving program, called AutoBlack, that automatically darkens the screen and bounces an analog clock around until mouse movement is detected. (The program can really only be used effectively by 512K or greater machines; 128K users should just dim their screens manually, or use one of the screen saving desk accessories.) On the other hand, if the machine is not going to be used for some 12 or more hours, turning it off will not really be a problem.

Finally, since many people ask about the cleaning of their disk drives, I would like to address that issue. From nearly eight month's experience of opening up and looking at disk drives, it is my opinion that using one of the commercially available head cleaners is not exceedingly necessary. It is very rare that the read heads get terribly dirty; this is the case even in the machines of heavy smokers. Consequently, I would suggest that a good dust cover would be more applicable to keeping the heads "clean" than the use of a possibly damaging (read, "abrasive") head cleaner.

Printers. Since most of you have Imagewriter I's and II's, those will be the types of printers we discuss specifically. However, much of what I have to say about the Imagewriters is applicable to other dot matrix printers, as well. (Note: I would discuss Laserwriters, but everything in them that is *user-serviceable* is covered fairly well within the manual.)

By far, the "problem" I have seen the most with printers is not printing once the print command has been issued. Sometimes, the solution is obvious — the printer cable is loose at one or both connections, or the cable is not connected into the proper port on the computer. But usually the problem is not so obvious — the PRAM, or parameter RAM, in the Macintosh has been corrupted. What this means is that the same memory that holds the time and date, also holds the *handshaking* values for the

Hotlines, Labs, and User Goups

Tx Union MicroCenter Hotline 471-6227 (Mon-Fri 9 to 6:00pm)
Computation Center Hotline 471-6317 (Mon-Fri 1 to 4:45pm, Wed 1 to 3:45pm)

Tx Union Computer Lab Must pay with TUX card. Available for student org. and students. (Mon-Thurs 8:30- 8:30pm, Fri 8:30-4:30pm)
Computation Center Microcomputer Lab IBM and Macintosh-free microcomputer use for students, faculty, and staff with valid UT ID (Mon-Thurs 8-12midnight, Fri 8am-9pn, Sat 12-6pm, Sun 12-10pm)
Perry-Castaneda Library Microcomputer Center IBMs free microcomputer use for students, faculty, and staff with current valid UT ID (Mon-Thurs 10-10pm, Fri 10-6pm, Sat 12-6pm, Sun 1-10pm)

UMUG Univ. Mac User Group call 471-5569
PCUT Personal Computers at UT - Sponsored by the Computation Center, focus is on all aspects of microcomptuer use. Contact Mildred Joseph at 471-3241
XICS Xerox Integrated Composition System - XICS is a typeseting lanaguage for us on the Xerox 9700. Contact Terry Young 471-6317
MPURCH Automated Purchasing System Users Group - This group has an automated purchasing system that routes departmental purchasing orders and makes the proper fund accounting entries. Contact John Wheat 471-1413
DECUS Digital Equipment Computer Users Society - Focus is on use of VAX computers. Contact Marg Knox 471-3241 ext 273

serial ports. If these values have in some way become corrupt (i.e., some program modified them, a spike occurred on the line, the battery is going dead, etc...), the printer cannot respond because the transfer protocol on the Macintosh end is not correct. The best way to determine if this is the problem is to first go through the process of shutting the computer down. Once the computer is properly shut down and turned off, the battery should be removed from its compartment, which is located just above the on/off switch. After leaving the Macintosh off for a few minutes, the battery reinserted, then the Macintosh is switched back on. At this point, the ROM firmware will notice that the PRAM values have been zeroed out, and as a result the default values will be reprovided (including the time and date, which you will have to reset to the current values with the appropriate desk accessories). Now, to determine if the problem was indeed PRAM corruption, put in a disk, say your System Tools disk, and try performing a screen dump or printing a Finder catalog. If either or both of these work, then try re-printing from you software that was originally having problems.

Sometimes, it is not the fault of the PRAM, but it is either the printer or the computer itself that is not functioning properly (very rarely is it both). In order to avoid having to bring both the computer and the printer in for service, first try to determine which is causing the problem. One of the best ways to do this is to take the hardware that you think is most likely causing the problem over to a friend's house. If possible, take both items. In this way, you and your friend can continue to "swap" connections until you find the guilty party. Often, you will try this, and everything will work fine until you take it back to your own house. At this point, you might suspect faulty power. So try moving your equipment to another outlet to see what happens. If taking your equipment to a friend's house is not convenient, or none of your friends have equipment like yours, then there are some things you can try by yourself. First, determine if the printer can print anything at all. You can do this by performing a self-test. First, make sure a sheet of paper is loaded, and then while powering the printer up, hold down the form-feed button. This procedure just causes the printer to cycle through its character set over and over again until it either runs out of paper or you shut it off. Since this does take a little practice, you might have to attempt it a couple of times before you decide that it is indeed the printer that has died. On the other hand, if the self-test does work, you may now want to test the computer. One way to do this is to use the Chooser desk accessory. In this way, you can choose to have the Macintosh send its printer output through the port opposite to that in which you originally had it. For example, if you normally have your printer connected to the printer port, you may try connecting it to the modem port. Once you have made both the logical and physical connections, try printing. If the printer now works, then one of the serial ports on your Macintosh is

probably bad. Or, if the printer still will not respond, then you are back to square one. The reason for this is that it could either be that the printer just won't respond because it truly is malfunctioning, or it could be that both the serial ports on your Macintosh are dead. However, experience has shown that it is more likely the Macintosh than the printer, **if the printer's self-test worked.**

Another very common user-serviceable type of problem is print smearing. Usually, what has gone "wrong" in this case is that an over abundance of ink has become clogged up between the print-head and the aluminum paper guide. On the Imagewriter I, removal of the print-head is very easy. The steps for doing it are as follows. First, remove the ribbon cartridge. Then, observe that there is a pair of metal "wings" up near the actual head. These wings need to be pulled away from the head. If you find that they are "stuck," it is probably because one or both of them is being held by a retaining

NEW SOFTWARE

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Smash-Hit Racquetball	$13.75
Univited (high resolution graphics adventure game)	$34.00

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screw. These screws are located towards the head's center. Each may be loosened with a small flat-blade screw driver. Once you finally get the wings pulled back, you can pull the entire head out by just lifting up on it. (Caution: Some print-heads are in tighter than others, and as such they require a little prying.) When the head is finally out, you will notice that the paper guide (the piece of the aluminum on the front of the head) can be removed by unscrewing the small phillip's retaining screw. At this point, the paper guide can be washed with soap and water, and the print-head itself can be cleaned with an alcohol solution of 91% or better. An old toothbrush or similar instrument can be used to apply the alcohol. Just reverse the process to replace the print-head.

Removal of the Imagewriter II's print-head is actually much easier. BUT, putting it back in can be very tricky, and if it is not done properly, the printed circuit board (PCB) which retains the head can be damaged. As such, I hesitate to give instructions for the removal of the Imagewriter II's print-head in an article such as this. Mainly, my hesitations stem from the fact that if the print-head PCB is damaged when brought in for service, **there will be no Apple warranty (either original or extended) that will cover it**, and the cost for fixing it will be $59.95 plus sales tax. Consequently, if you would like to know how to remove one, I would feel much better showing you in person.

Even more often than print smearing, I have seen the problem of paper misfeeding. Yet, most of the problems I see in this area are usually the result of the paper not being fed in properly. Part of this problem, I believe, stems from the fact that the manuals provided with the printers aren't very clear on actually how one is *really* supposed to feed the paper. Fortunately, the process is almost exactly the same for both Imagewriter I's and II's, and for that matter, most dot matrix printers. So, the first thing to do is turn the printer off (NEVER turn the platen knob when the printer is on — doing so can strip the gears in the paper feed motor). Then, set the appropriate feed mode. On the Imagewriter I's, this is done by moving the lever on the left side of the platen towards the appropriate icon. (The rear icon is for tractor feed, and the forward icon is for friction feed.) On the II's, the lever is located within the platen knob itself. (The positions of the icons are reversed, however.) For tractor feeding, the first thing to do is to unlock the tractors so that they will move freely on the tractor bar. Then, spread the individual tractors across the tractor bar until they are approximately the paper's width. Without locking them down yet, position the paper on the tractor wheels as far back as possible (i.e, only use one or two of the tractor teeth). Now, clamp the paper down, and roll it forward with the platen knob. Once the paper is under the paper bail and the bail is down, roll the paper up and down. While doing this, check to see if any buckling occurs. If it does, spread the tractors out appropriately. When you are satisfied that the bulking is gone, lock the tractors down. At this point position the paper where you want it to start

printing. *(CAUTION: Do not roll the platen backwards with mailing labels; they will unpeel. Instead, remove the buckles by moving the tractors at the same time as the labels are rolled through in the forward direction.)* Note that if you use large quantities of paper (like 1000 or 2500 sheet packages), you should periodically make sure that the tractor settings are still correct. The reason to perform this check is because changes in humidity cause paper to slightly expand or contract, thus causing the original tractor positions to possibly be incorrect. The other mode, the friction feed mode, of the Imagewriters' is very similar to using a standard typewriter — the paper just needs to be fed through far enough that the platen rollers catch it. Once caught, the paper can be brought to its starting position with the platen knob.

Finally, I guess I should say something about stuck mailing labels. Most probably, you will be able to remove them yourself — the process of disassembling and re-assembling the two printers to the point necessary for removing labels is not extremely difficult. However, I do have reservations about describing these processes here, and hence if you would like to have these instructions, come in and talk to me. The cost for having a label removed by one of the MicroCenter personnel is $25.00.

Hard drives. In the past year, the hard drive market for the Macintosh has literally exploded. Probably the single most contributing factor to this phenomenon was the introduction of the Macintosh Plus with its standardized SCSI bus. Nevertheless, there are still a large number of serial port and external drive port hard disk drives out there. And fortunately, it is not so much the *use* of the hard drives, but rather their *care* which we are concerned about here. To this end, it should be noted that all Winchester type hard drives (i.e., almost all hard drives except the cartridge-type), regardless of their capacities, have certain common characteristics. First, the media itself is constantly spinning. Second, the actual reading mechanisms (heads) are shaped like little air foils, and as such are always "flying" above the media. Consequently, the heads and the disks are supposed to be at right angles to each other. If, at any time during the operation of the drive, the heads actually make contact with the media, serious damage could result. For this reason, the hard drives should be kept on flat, stable surfaces. But, even when the drives are not in use, it is generally not a good idea to have the heads bouncing into the media. In order to prevent this, most of the drives come with a program called a "parker." The function of such a program is to, first, retract the heads away from the media, and then to lock them in place. Usually, the locking is performed with some kind of magnetic switch, which means that the drive must actually be turned off before it can be used again.

Unfortunately, some drives, especially the older serial port drives, do not come with any kind of parking mechanism. For those of you who have such drives, always try to port your drive so that the least disk surface

area is horizontal to the ground. Also, it should be noted that many drives, including Apple's, do not come with any explicit software that does parking. With these drives, then, you should never just turn them off when you plan to transport them. At the very least, you should use the "Shut Down" item under the Finder's "Special" menu. The reason for doing this is that some drives include the parking routines within the Macintosh interfacing software (called device drivers). As such, whenever one of these drives is "Shut Down," the drive automatically gets parked. (But, as stated above, this is not always the optimal solution, especially when the parking mechanism of the drive actually requires the drive to be turned off and then repowered up to be used again. Generally, the drive can't be damaged, but what happens is that if the drive is not turned off in time, the Macintosh attempts to reboot it, and, of course, the heads are not able to move. Sometimes, a kind of "grinding" noise results. What is happening is that the gears that actually cause the heads to move are kept from engaging by the magnet, and as such they just spin in place.)

Other Peripherals. Although the Macintosh is not yet an "open architecture" machine, there are still dozens of "other" peripherals available for it. Probably the most abundant of these is modems. Fortunately, modems are of the most reliable type of computer electronics available. Most have no moving parts, require very little power, and don't generate much heat. As a result, the bulk of the problems that I have seen with modems never really involve the modem itself. Usually, the problems involve software, phone lines, cables, or the ports on the computer.

The other abundant type of peripheral available for the Macintosh is digitizers. Some of these digitize images, others digitize sounds. However, most require use of the Macintosh serial ports. As such, some small digitizers, such as MacNifty's SoundCap, and ThunderWare's ThunderScanner, actually draw current from the ports. Unfortunately, Apple felt this wasn't't such a good idea, so they removed the power pin on the Macintosh Plus serial ports. This problem has been solved by some companies by making an external power supply that "looks like" the old 9-pin Macintosh serial ports. As such, even those of you who own 128K and 512K machines can make use of the these adapters, thereby guarding your Macintosh from a possibly unnecessary power drain.

To conclude, I would like mention that even though preventative measures are helpful, they cannot ensure that your equipment will always remain trouble-free. For this reason, most computer manufacturers have provided their customers with a means through which normal breakdowns can be serviced under a continuously renewable yearly fee. In Apple's case, this plan is called AppleCare. At the moment, all Apple equipment comes with an original 90-day warranty. The extended warranty — AppleCare — can be purchased on any Apple machine any time *within* the original warranty period, for no

charge. If a machine is not under the original warranty, AppleCare may still be purchased, but the equipment will first have to first be inspected by an authorized Apple service repair center. For the most part, AppleCare prices are such that they are lower than what the cost for even one repair on a particular machine would cost. Thus, buying AppleCare is somewhat like buying "life insurance" for your computer: You don't buy it because you *know* that your equipment will "die;" you buy it so that you are prepared if it does.
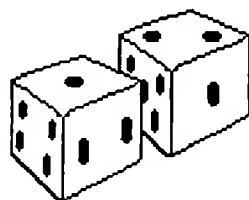
Don't Crap Out!
Buy AppleCare

Listed below are the most common Mac repairs and their prices as compared to AppleCare.

Common Repairs

CPU REPAIRS	COST
Power Supply	$125.80
512K Logic Board	$213.54
Mac Plus Logic Board	$221.52
Internal 400K Drive	$137.73
Internal 800K Drive	$144.38
Keyboard Exchange	$115.12
Mouse	$87.12

PRINTER REPAIRS	COST
ImageWriter I carrier moter	$106.13
ImageWriter I printhead	$104.80
ImageWriter II printhead	$91.87
ImageWriter II carrier motor	$111.82
ImageWriter II main drive pcb	$133.10
Paper Feed Motor I	$115.44
Paper Fed Motor II	$83.89

DRIVE REPAIRS	COST
400K External Drive	$127.73
800K External Drive	$134.38
HD 20 Controller Board	$111.45
HD Power Supply	$63.84

AppleCare

CPUS	APPLECARE
512K AppleCare	$115.00/yr
MacPlus AppleCare	$122.00/yr

PRINTERS	APPLECARE
ImageWriter I	$48.00/yr
ImageWriter II	$45.00/yr

DRIVES	APPLECARE
400K Drive	$36.00/yr
800K Drive	$36.00/yr
Hard Disk 20 and 20SC	$162.00/yr

Warranty Expired?

If you've let your initial 90-day warranty expire and would like to renew it, you must bring your Apple product in for an inspection before renewal. Inspection prices:

Mac 512K or Mac Plus	$30.00
ImageWriter I	$25.00
ImageWriter II	$40.00
400K/800K External Drive	$20.00
Apple Hard Disk20	$25.00
Apple Personal Modem	$20.00
300/1200 Baud Apple Modem	$20.00

MicroCenter Macintosh Class Schedule

Macintosh Orientation: The purpose of this class is to introduce the basic commands that you will use to operate the Mac with the software.

Date	Day	Time	Room
Mar 2	Monday	1:30p-3:00p	4.224
Mar 17	Tuesday	10:30a-noon	4.224
Mar 30	Monday	1:30p-3:00p	4.224

MacWrite/MacPaint: In this class, we'll show you how to use MacWrite to create documents and templates, organize your files, and use an external disk drive. With MacPaint, you will learn how to use the option, shift and command keys, create animated objects and more!

Date	Day	Time	Room
Mar 12	Thursday	10:30a-noon	4.224
Mar 31	Tuesday	1:30p-3:00p	4.224

MS Word I This class will provide an introduction to MS Word, covering the features of Word Version 1.05.

Date	Day	Time	Room
Mar 9	Monday	10:00a-11:30a	4.224
Mar 26	Thursday	10:30a-noon	4.224

MS Word II This class will cover the new features unique to Word 3.0! Outlining, indexing, and sorting are a few of the new commands that will be demonstrated.

Date	Day	Time	Room
Mar 18	Wednesday	1:30p-3:00p	4.224
Mar 30	Monday	10:00a-11:30a	4.224

Write Now This new word processor combines an extensive set of capabilities with the ease of use that has made the Macintosh unique. In class, we will cover its exciting new features such as on screen multiple columns and footnotes, and on-line spelling checking.

Date	Day	Time	Room
Mar 10	Tuesday	1:30p-3:00p	4.224
Mar 23	Monday	10:00a-11:30a	4.224

MS File: This course will provide introductory instructions necessary to create and work successfully within Microsoft File. Main topics include: creating, working in and editing a data file, in addition to creating a report.

Date	Day	Time	Room
Mar 9	Monday	1:30p-3:00p	4.224
Mar 23	Monday	1:30p-3:00p	4.224

Excel I: Spreadsheets and charts are the topics of this class! Although we will cover the spreadsheet and chart functions of MS Excel, many of the commands also apply to Multiplan and Chart.

Date	Day	Time	Room
Mar 5	Thursday	2:00p-3:30p	4.108
Mar 19	Thursday	2:00p-3:30p	4.224

Excel II: This class will provide an introduction to the macros and database functions of MS Excel.

Date	Day	Time	Room
Mar 12	Thursday	2:00p-3:30p	4.108

Works I: MS Works integrates applications for word processing, communications, database and spreadsheet. This class will introduce to the word processing and communication functions of MS Works.

Date	Day	Time	Room
Mar 3	Tuesday	10:00a-11:30a	4.224
Mar 24	Tuesday	1:30p-3:00p	4.224

Works II: This class will provide an introduction to the spreadsheet and database functions of MS Works.

Date	Day	Time	Room
Mar 4	Wednesday	2:00p-3:30p	4.224
Mar 25	Wednesday	1:30p-3:00p	4.224

PageMaker: Using PageMaker, you can combine text and graphics on a page to produce publication from documents created with other Mac applications. This class will introduce this desktop publishing package.

Date	Day	Time	Room
Mar 16	Monday	10:00a-11:30a	4.224

MacDraw: Are you ready to go beyond MacPaint? This course will cover the basic usage of this object-oriented graphics package.

Date	Day	Time	Room
Mar 11	Wednesday	10:30a-11:30a	4.224

Terminal Emulators: Interested in computer telecommunications? This class will show you how to get your Macintosh up and running with other computers.

Date	Day	Time	Room
Mar 26	Thursday	2:00p-3:00p	4.224

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